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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/871,408	05/31/2001	Izhak Baharav	10003977-1	9280

7590   05/20/2004

AGILENT TECHNOLOGIES, INC.
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EXAMINER
WU, JINGGE

ART UNIT	PAPER NUMBER
2623	4

DATE MAILED: 05/20/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on *31 May 2001*.

2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) *1-33* is/are pending in the application.

   4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☐ Claim(s) *1-33* is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.

   Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

   Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

   a) ☐ All b) ☐ Some * c) ☐ None of:

   1. ☐ Certified copies of the priority documents have been received.

   2. ☐ Certified copies of the priority documents have been received in Application No. _____.

   3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

   * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *2,3*.

4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2.   Claims 1-3, 9, 11-16, 23-26, 30, 32-33 are rejected under 35 U.S.C. 102(b) as

being anticipated by US 5838818 to Herley (a reference of PTO-1449).

As to claim 1, Herley discloses a method of demosaicing a mosaiced image

comprising:

receiving said mosaiced image, said mosaiced image being representation of a

scene of interest (fig. 6, 610 and 620, col. 1 lines 11-15, and col. 5 lines 49-50, note that

the scene of interest is inherent because of digital camera); and

processing said mosaiced image using a demosaicing operator (fig. 6, 610-620,

660-670) on blocks of said mosaiced image to derive a representation of demosaiced

image (col. 3 line 66- col. 4 line 37), said demosaicing operator incorporating a

frequency based transformation (DCT) operator to take into account a subsequent

frequency-based compression process (col. 4 line 65-col. 5 line 30).

As to claims 2-3, Harley further discloses the demosaicing operator uses a color

space operator for converting an original color space RGB to a different color space

(YCrCb) (col. 3 lines 9-10 and line 49).

As claim 9, Harley further discloses DCT transformation (col. 3 line 42).

As to claims 11-12, Harley further discloses the representation of said demosiaced image includes a plurality of image pixel values (fig. 3) and a plurality of transformed coefficients matrices (col. 4 lines 2-38, col. 5 lines 3-30, note that DCT transform is inherently used matrices).

As to claim 13, Harley discloses limitations of receiving mosaiced image and demosaiceing the image (see discussion in claim 1) and compressing the representation of the demosaised image using a frequency-based compression scheme (JPEQ) (fig. 5-6col. 5 lines 31-62).

As to claims 14-15, the discussions are addressed with regard to claims 2-3.

As to claims 16 and 23, the discussions are addressed with regard to claims 11-12.

As to claim 21, the discussions are addressed with regard to claim 9.

AS to claims 24-26, 30, 32-33, the claims are corresponding apparatus claims to claims 1-3, 9, 11-12.

Claim Rejections - 35 USC § 103

3.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4.   Claims 6, 8, 19, and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Harley in view of US 6731794 to Zhang et al.

As to claims 6, 8, 19, and 28, Harley does not mention the demosaicing operator is derived by defining the transformation-related coefficients as having a predefined probability distribution such as normal distribution.

Zhang, in an analogous environment, discloses that the demosaicing operator is derived by defining the transformation-related coefficients as having a predefined probability distribution such as normal distribution (col. 6 lines 8-27).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to use the scheme of Zhang in the method of Harley in order to reduce the artifacts in the demosaiced image (Zhang, col. 2 lines 27-50).

5.   Claims 4-5, 7, 10, 17-18, 20, 22, 29 and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Harley in view of WO 01/26359 to Tao (a reference of PTO 1449).

As to claims 4-5 and 17-18, Harley does not explicitly mention the demosicing operator being derived by defining selected coefficients of transform-related as being equal to zero and having higher frequency than remaining coefficients.

Tao, in an analogous environment, discloses the feature (page 11, lines 6-10).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to use the scheme of Tao in the method of Harley in order to obtain efficient compression and reduce the artifacts (page 2 line 5-10 and page 11, line 10).

As to claims 10, 22, and 31, Tao further discloses wavelet transform (abstract).

As to claims 7 and 20, Harley does not mention Bayian rule to derive the operator.

Examiner takes Official Notice that the feature is notoriously well known in the art.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to use the scheme of Bayesian rule in the method of Harley in order to obtain efficient compression and reduce the artifacts (page 2 line 5-10 and page 11, line 10, note that fig. 2 of Tao is a Bayer patter so that the operator should follow the pattern to choose the filter see page 8).

As to clam 29, Harley does not mention embodied IC for demosaicing and compressing.

Examiner takes Official Notice that the feature is notoriously well known in the art.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to use the special embodied IC in the apparatus of Harley in order to obtain efficient computation so as to increase the speed of processing.

Contact Information

6. Any inquiry concerning this communication or earlier communications should be directed to Jingge Wu whose telephone number is (703) 308-9588. He can normally be reached Monday through Thursday from 8:00 am to 5:30 pm. The examiner can be also reached on second alternate Fridays.

Any inquiry of a general nature or relating to the status of this application should be directed to TC customer service whose telephone number is (703) 306-0377.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Amelia Au, can be reached at (703) 308-6604.

The Working Group Fax number is (703) 872-9314.

Jingge Wu

Primary Patent Examiner